Plotting Mortgages

Lecturer: John Guttag

```
class MortgagePlots(object):

    def plotPayments(self, style):
        pylab.plot(self.paid[1:],style,label=self.legend)

    def plotTotPd(self, style):
        totPd = [self.paid[0]]
        for i in range(1, len(self.paid)):
            totPd.append(totPd[-1] + self.paid[i])
        pylab.plot(totPd, style, label = self.legend)
```

```
def compareMortgages(amt, years, fixedRate, pts, ptsRate,
                     varRate1, varRate2, varMonths):
    totMonths = years*12
    fixed1 = Fixed(amt, fixedRate, totMonths)
    fixed2 = FixedWithPts(amt, ptsRate, totMonths, pts)
    twoRate = TwoRate(amt, varRate2, totMonths,
                      varRate1, varMonths)
    morts = [fixed1, fixed2, twoRate]
    for m in range(totMonths):
        for mort in morts:
            mort.makePayment()
    plotMortgages(morts, amt)
```

```
def plotMortgages(morts, amt):
    styles = ['b-', 'r-.', 'g:']
    payments = 0
    cost = 1
    pylab.figure(payments)
    pylab.title('Monthly Payments of Different $'\
                + str(amt) + ' Mortgages')
    pylab.xlabel('Months')
    pylab.ylabel('Monthly Payments')
    pylab.figure(cost)
    pylab.title('Cost of Different $' + str(amt)\
                + ' Mortgages')
    pylab.xlabel('Months')
    pylab.ylabel('Total Payments')
    .
    .
    .
```

```
for i in range(len(morts)):
        pylab.figure(payments)
        morts[i].plotPayments(styles[i])
        pylab.figure(cost)
        morts[i].plotTotPd(styles[i])
    pylab.figure(payments)
    pylab.legend(loc = 'upper center')
    pylab.figure(cost)
    pylab.legend(loc = 'best')
```